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Evaluating online learning environments

The development and validation of an online learning environment instrument

 **LAMBERT**
Academic Publishing

Impressum/Imprint (nur für Deutschland/ only for Germany)

Bibliografische Information der Deutschen Nationalbibliothek: Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

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Coverbild: www.purestockx.com

Verlag: LAP LAMBERT Academic Publishing AG & Co. KG

Theodor-Heuss-Ring 26, 50668 Köln, Germany

Telefon: +49 681 3720-310, Telefax: +49 681 3720-3109, Email: info@lap-publishing.com

Herstellung in Deutschland:

Schaltungsdienst Lange o.H.G., Berlin

Books on Demand GmbH, Norderstedt

Reha GmbH, Saarbrücken

Amazon Distribution GmbH, Leipzig

ISBN: 978-3-8383-0156-3

Imprint (only for USA, GB)

Bibliographic information published by the Deutsche Nationalbibliothek: The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

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Printed in the U.S.A.

Printed in the U.K. by (see last page)

ISBN: 978-3-8383-0156-3

Abstract

Increasingly the perceived benefits of using networked computers, software applications and computer simulations in learning activities are being exploited at all educational levels and within all curricula areas. As web-based and online software applications such as browsers, search engines, communication tools and data-bases mature, so does educator's use of this medium for teaching and learning. How we can investigate the impact of these technologies upon the educational experiences of learners was the fundamental concept addressed by this thesis. The study reports on the design, development and validation of a web-based survey instrument for use in online learning environments in tertiary education. The thesis investigated both previous psychosocial learning environment instrument development studies and the nature of environments created by the use of information and communication technologies. The research followed a two-phased instrument development process. Phase one focused on content validity, identifying salient scales and items and piloting the instrument with a limited audience. Phase two focused on construct validity, conducting an extensive field test with a web-based form and performing statistical analysis on the online data collected. Principal components analysis, with oblique and orthogonal rotations, confirmed the structure of a 35-item 7-scale instrument. The thesis concludes by confirming the new instrument, the Online Learning Environment Survey (OLLES), will allow conclusions to be drawn about student perceptions on the interactions occurring in their online environments in an economical and efficient manner.

Increasingly the perceived benefits of using networked computers, software applications and computer simulations in learning activities are being exploited at all educational levels and within all curricula areas. As web-based and online software applications such as browsers, search engines, communication tools and data-bases mature, so does educator's use of this medium for teaching and learning. How we can investigate the impact of these technologies upon the educational experiences of learners is the fundamental concept addressed by this study. The study concludes by presenting a new learning environment instrument, the Online Learning Environment Survey (OLLES), that will allow conclusions to be drawn about student perceptions on the interactions occurring in their online environments in an economical and efficient manner.



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John Clayton is a e-learning educator with extensive knowledge of deploying and evaluating e-learning technologies. He is currently the manager of the Emerging Technologies Centre at the Waikato Institute of Technology and for the last three years has been a member of the New Zealand Ministry of Education e-Learning Reference Group.



978-3-8383-0156-3